THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY

OF

LEIGH C. FORD

APRIL 28, 2015

DOCKET NO. 2015-55-E

Application of Duke Energy Carolinas, LLC to Establish a Distributed Energy Resource Program

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LEIGH C. FORD

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2015-55-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC TO ESTABLISH A DISTRIBUTED ENERGY RESOURCE PROGRAM

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Leigh C. Ford. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as a Manager, in the Electric Department of the South Carolina Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I earned a Bachelor's Degree from Lenoir-Rhyne University. Prior to my employment with ORS, I was a Field Service Representative with the South Carolina Budget and Control Board. I joined ORS in November 2007 as an Electric Utilities Specialist, was promoted to Senior Electric Utilities Specialist in May 2010 and promoted to Manager of the Electric Department in February 2014. I have participated in numerous Duke Energy Carolinas, LLC ("Duke" or the "Company"), Duke Energy Progress, Inc. ("Progress"), Lockhart Power Company and South Carolina Electric & Gas Company ("SCE&G") settlement negotiations concerning base rate cases, fuel proceedings and net metering.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA?

A. Yes. I have testified before the Public Service Commission of South Carolina ("Commission") in fuel and general rate proceedings as well as the recent proceeding regarding net metering. I also presented an allowable ex-parte briefing regarding renewable resources and their role in South Carolina's electric generation portfolio.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to provide an overview of the Distributed Energy Resource Program Act ("Act 236"), describe Duke's proposed Distributed Energy Resource Program Application ("DERP"), and ORS's recommendations regarding Duke's DERP presented in this Docket.

Q. PLEASE DESCRIBE ACT 236.

A. Act 236 was signed into law June 2, 2014. Act 236 provides for (1) a distributed energy resource program for South Carolina which will promote the growth of renewable resources throughout the State; (2) a net metering methodology and program; (3) leasing of renewable electric generation equipment; (4) the promulgation of interconnection standards; (5) cost recovery to Utilities and cost recovery caps to ratepayers; (6) studies to evaluate the extent of cost-shifting attributable to distributed energy resources; and (7) various other reports.

Act 236 states that any distributed energy resource program shall, at a minimum, result in development by 2021 of renewable energy facilities located in South Carolina with a nameplate capacity equal to at least two percent of the previous five-year average of the electrical utility's South Carolina retail peak demand. For Duke, this amount equates to approximately 80 megawatts ("MW"). Of this two percent, Act 236 states that half shall be met by facilities sized between one (1) and ten (10) MW, hereafter defined as "Utility Scale Program." The remaining half shall be met by facilities sized less than one (1) MW ("Customer Scale Program") with a quarter of the one percent nameplate capacity being from renewable energy generation 20 kilowatts ("kW") or less ("Small Scale Requirement"). For Duke, the Utility Scale Program equates to approximately 40 MW. The Customer Scale Program also equates to approximately 40 MW, of which approximately 10 MW shall fulfill the Small Scale Requirement.

Q. WHAT IS REQUIRED WHEN REQUESTING APPROVAL OF A DISTRIBUTED ENERGY RESOURCE PROGRAM?

A. At a minimum, the following items are required by S.C. Code § 58-39-130(A)(1):

a) a statement of the specific goals to be addressed by the program and the benefits to be achieved from its implementation;

b) a description of the principal elements of the program and the benefits to be achieved from the implementation of each of those elements;

c) a description of the utility's planned actions to implement the program and the anticipated timing of those actions;

d) the locational benefits and costs of proposed distributed energy resources, if relevant;

e) any proposed customer programs and changes in tariffs, or other mechanisms that support the prudent, efficient, and reliable deployment of cost-effective distributed energy resources and the goals of the distributed energy resource program;

f) additional utility expenditures necessary to integrate cost-effective distributed energy resources into distribution and transmission planning;

g) a description and evaluation of any barriers to the deployment of distributed energy resources as envisioned in the plan, if relevant;

h) a schedule of the projected incremental costs anticipated to implement the electrical utility's distributed energy resource program for each year of the subject period; and

i) an estimate of costs to be incurred pursuant to the distributed energy resource program and an estimate of those costs to be recovered pursuant to Sections 58-27-865 and 58-39-140 to fully recover the projected costs of the program.

Q. DOES DUKE'S APPLICATION INCLUDE THE AFOREMENTIONED INFORMATION?

A. Yes.

Q. WHAT COSTS ARE RECOVERABLE UNDER ACT 236?

A. Act 236 allows the recovery of avoided and incremental costs associated with distributed energy resource programs. Recovery of avoided costs, which are payments for purchases of electricity, are calculated according to the lesser of rates negotiated pursuant to Public Utility Regulatory Policy Act of 1978, also known as PURPA or an electrical utility's most recently approved or established avoided cost rates in South Carolina.

Section 58-39-140(A) defines incremental costs as "all reasonable and prudent costs incurred by an electrical utility to implement a distributed energy resource program pursuant to the provisions of Section 58-39-130…" Incremental costs include, but are not limited to: costs in excess of the avoided costs or negotiated PURPA; the full cost of a utility's investment in non-generating distributed energy resources; the utility's weighted average cost of capital as applied to the electrical utility's investment in distributed energy resources; generally accepted expenses associated with a project, such as operating and maintenance expenses, taxes, insurance, depreciation, overheads, etc.; and incremental labor cost associated with implementing a distributed energy resource program.

Q. HOW ARE AVOIDED AND INCREMENTAL COSTS ALLOCATED AND RECOVERED FROM CUSTOMERS?

A. The avoided and incremental costs of distributed energy resource programs and net metering are to be allocated and recovered from customer classes based on the utility's South Carolina firm peak demand data from the prior year – the same method that is used to allocate and recover variable environmental costs.

Recovery of incremental costs are capped annually per account at $12 for residential; $120 for commercial; and $1,200 for industrial.

Q. DO THE COSTS ASSOCIATED WITH DUKE'S DERP COMPLY WITH THE COST CAPS OUTLINED IN ACT 236?

A. Yes. Duke proposes that the incremental cost component of the fuel factors ("DERP Component") be billed as a dollar amount per account. Duke defines an account as all accounts, both metered and unmetered, that serve the same customer of the same revenue classification that are located on the same or contiguous properties. As such, a commercial customer with several commercial accounts on the same premise will only be billed one monthly DERP Component.

Billing the DERP Component as a dollar amount per account ensures that customers are not billed more than the annual amounts prescribed in Act 236. While cost recovery and the implementation of the DERP Component will be requested in future annual fuel reviews, ORS finds Duke's cost projections to be consistent with the requirements of Act 236.

Q. PLEASE EXPLAIN HOW DUKE'S DERP WILL RESULT IN THE DEVELOPMENT OF RENEWABLE ENERGY FACILITIES IN SOUTH CAROLINA.

A. In its application, Duke details how it proposes to meet the Utility Scale Program and Customer Scale Program outlined in Act 236. In order to meet the Utility Scale Program, Duke states that it will solicit proposals for ten (10) year purchase power agreements ("PPA") and turnkey proposals with engineering, procurement and construction ("EPC") agreements. For the Customer Scale Program, the Company proposes three DERP customer offerings: 1) net metering DERP incentives, 2) a solar rebate program, and 3) a shared solar offering.

Q. PLEASE EXPLAIN DUKE'S PROPOSAL TO MEET THE UTILITY SCALE PROGRAM.

A. Within ninety (90) days of the DERP receiving Commission approval, the Company will solicit proposals for PPA and EPC agreements through a competitive bidding process. The selected projects will be eligible for applicable state and federal tax credits if fully operational by the end of 2016. The Company anticipates achieving the capacity targets set by Act 236 in a cost effective manner.

Q. DOES ORS HAVE ANY RECOMMENDATIONS TO UTILITY SCALE PROPOSAL?

A. Yes. In its evaluation of the Company's proposed PPA, ORS notes that a ten (10) year PPA is considered somewhat short in today's renewable market. ORS encourages

Duke to evaluate the cost-effectiveness of a longer term PPA, such as fifteen (15) to twenty (20) years, which may capture more competitive bids without prolonging the recovery period.

If the Company does extend the length of its PPA, ORS recommends that the amortization of DERP rebate costs match the maximum length of the DERP PPA.

Q. PLEASE EXPLAIN DUKE'S PROPOSAL TO MEET THE CUSTOMER SCALE PROGRAM.

A. Duke proposes three initiatives in its DERP to meet the Customer Scale Program. The first is a net metering DERP incentive. In Docket No. 2014-246-E, the Commission ordered that Duke, Progress and SCE&G (collectively, the "Utilities") offer net metering customers full retail value for energy they generate ("1:1 Retail Rate"). The Utilities will use the approved methodology to determine if DERP incremental costs are incurred as a result of providing net metering customers the 1:1 Retail Rate. The DERP incremental costs will be considered a net metering DERP incentive.

The second Customer Scale Program initiative is the Solar Rebate Program. This program offers a per-kW rebate for a completed installation of a renewable energy generation facility.

The third Customer Scale Program initiative is the Shared Solar option. In this option, customers can subscribe to a portion of a renewable energy facility and receive bill savings based on their share of the energy output of this facility. Duke requests that its Shared Solar option be credited and applied towards its satisfaction of the Small Scale Requirement under Act 236.

Duke also requests that it be allowed to modify or introduce programs and notify the Commission and ORS within fifteen (15) days.

Q. DOES ORS HAVE ANY RECOMMENDATIONS FOR THE NET METERING DERP INCENTIVE?

A. No. This incentive is proposed to be implemented as contemplated in Docket No. 2014-246-E.

Q. DOES ORS HAVE ANY RECOMMENDATIONS TO DUKE'S SOLAR REBATE PROGRAM?

A. Yes. ORS supports Duke's Solar Rebate program. It is commonly understood, however, that the solar market will respond more positively if the return on investment period is shortened for customers installing solar.

Additionally, ORS is concerned with Solar Rebate annual participation caps proposed by Duke. In its tariff, Duke states that the participation shall not exceed 8,000 kW (AC) of generation per year and that once that capacity limit is reached, no new applications will be accepted until the next calendar year. These limitations could slow the development of solar in South Carolina, and ORS recommends that the Company re-evaluates these limitations.

Q. DOES ORS HAVE A RECOMMENDATION REGARDING THE ASSIGNABILITY OF SOLAR REBATES ASSOCIATED WITH DUKE'S SOLAR REBATE PROGRAM?

A. Yes. Duke proposes that it will provide to the customer a one-time rebate after completion of the solar project. ORS recommends that Duke also allow customers to assign the solar rebates to the companies from which the customer is leasing a solar generating facility. This flexibility allows the customer, whether owning or leasing, to determine the best financial use of the solar rebate.

Q. PLEASE EXPLAIN ORS'S RECOMMENDATIONS FOR DUKE'S SHARED SOLAR OPTION.

A. Duke requests that its individual Shared Solar subscriptions that are less than 20 kW be credited and applied towards the satisfaction of the Small Scale Requirement in Act 236. At this time, ORS recommends that Duke defer and reevaluate this request until customer participation and solar adoption rates are better understood.

Q. DOES ORS HAVE ANY OTHER RECOMMENDATIONS FOR THE CUSTOMER SCALE PROGRAM?

A. Yes. In order to further incent low-income customers to participate in Duke's DERP, ORS recommends that Duke evaluate the viability of future incentives and offerings designed for the needs of low-income customers.

Q. DOES ORS HAVE A RECOMMENDATION AS TO THE COMPANY RETAINING OWNERSHIP OF THE RENEWABLE ENERGY CREDITS ("RECs") ASSOCIATED WITH ANY ENERGY GENERATED UNDER THE DERP?

A. Yes. The Company proposes to retain ownership of the RECs associated with the energy generated under the DERP, including new net metering customers. Considering that South Carolina ratepayers will pay for the energy that generated these RECs, ORS recommends that the Company retain ownership of the RECs and use them only to offset future South Carolina allocated environmental compliance costs. Additionally, ORS recommends that Duke not be allowed to use RECs generated in South Carolina to meet

North Carolina or any other state's compliance requirements, further ensuring that South Carolina ratepayers receive the full benefit of these RECs.

Q. WHAT ARE ORS'S RECOMMENDATIONS FOR ANY FUTURE PROGRAM MODIFICATIONS TO DUKE'S DERP?

A. While ORS understands Duke's desire for program flexibility, ORS proposes that Duke file for Commission approval of any program additions or terminations. Additionally, ORS recommends that Duke seek Commission approval for any program modification that results in a variation greater than 30 percent of a program's approved incentive or rebate. ORS also recommends that Duke be allowed to temporarily suspend a program for up to 90 days concurrent with notifying the Commission and awaiting approval of program modifications.

In order to obtain stakeholder input and feedback on Duke's DERP, ORS recommends that Duke form a DERP Collaborative Group to share ideas and concerns related to Duke's DERP. A similar collaborative process is used by the Utilities for their respective energy efficiency programs. ORS recommends that the DERP Collaborative Group meet quarterly and that group participants receive notification 15 days prior to Duke filing with the Commission to add, modify or terminate any DERP offering.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.